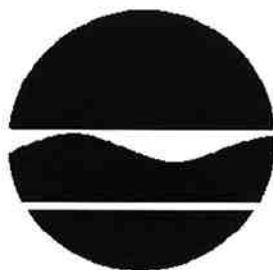


SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

SITE ID 208: ZENECA INC./STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS FACILITY

SITE SUMMARY REPORT
REVISION 1



Onondaga Lake Project
Task 5: 104(e) Review

Site No. 734030-002
Work Assignment Number D003060-9

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FIGURE 1 ZENECA/SMC Plant and Disposal Site Locations

1.0 SITE DESCRIPTION

The information referenced in this report was obtained from the 104(e) responses of ZENECA, Inc., Stauffer Management Company (SMC), and Rhone-Poulenc (Company ID 2006). Two mailings were received from ZENECA/SMC on September 22, 1994 and January 26, 1995 and were subsequently reviewed for completeness (see TAMS' Completeness Reviews A and B, March 7, 1995 and April 22, 1996, respectively).

1.1 Location

The Skaneateles Falls facility is located in the Town of Skaneateles Falls, Onondaga County, New York. The site is three miles north of Skaneateles Lake, on the eastern side of Jordan Road. The plant is situated on approximately 120 acres, and Skaneateles Creek runs north through the western side of this area. Figure 1 shows the location of the facility in relation to Onondaga Lake, as well as the off-site disposal facilities located within Onondaga County that are known to have accepted waste generated by the facility.

1.2 Geology

The surficial geology of the Syracuse area was strongly influenced by the most recent glacial advance (Wisconsin age, 12,000 to 14,500 years ago). Syracuse occupies a region that was covered by Lake Iroquois, a large glacial lake situated in front of the ice margin. The broad flat-lying plains situated north from Syracuse to Lake Ontario were formed beneath Lake Iroquois and are characterized by lacustrine fine sand and silt deposits. Additional glacial features common to the region are moraines, drumlins, U-shaped valleys and meltwater channels.

Onondaga Lake and all its major tributaries lie within glacial meltwater channels. These features originally were conduits carrying meltwater at large volumes and high velocities away from the glacier. Sediment types characteristically found in meltwater channels are sands and gravels. These relict features form important water bearing and transmitting units which form an irregularly branching, net-like pattern.

The bedrock geology of the greater Syracuse area includes Lower to Middle Paleozoic age sedimentary rocks predominated by carbonate (dolostone and limestone) and shale and containing some sandstone, siltstone and evaporites. Bedrock directly beneath many of the disposal sites (as well as underneath Onondaga Lake) is the Silurian Vernon Shale (Rickard and Fischer, 1970) which has low permeability, but does possess secondary porosity due to fractures.

The Skaneateles Falls facility is located outside of the Onondaga Lake drainage basin, and therefore a discussion of the geology of the site area is not included in this report.

1.3 Hydrogeology

Hydrogeologic information for the Skaneateles Falls site is not included in this report, as the site is located outside of the Onondaga Lake drainage basin. ZENECA/SMC was not required to provide hydrogeologic data for any of the off-site disposal facilities.

1.4 Surface Water Hydrology

Skaneateles Creek flows north through the western portion of the site. Surface water from the facility drains into the creek, which can be both an effluent (gaining) and influent (losing) stream depending on seasonal conditions, stream flow, groundwater table conditions, and the

segment of the stream. Skaneateles Creek flows into Cross Lake and the Seneca River, which in turn joins with Oneida River to form the Oswego River, which discharges to Lake Ontario. Thus, the Skaneateles Falls site is outside of the Onondaga Lake basin. The approximate Onondaga Lake watershed boundary is also shown in Figure 1.

Two of the waste disposal sites used by Stauffer Chemical Company are located within the Onondaga Lake basin, and ultimately drain into Onondaga Lake; the Maestri site is in close proximity to Onondaga Lake and the Onondaga Nation Barrel site is approximately 3,000 feet east of Onondaga Creek. The Town of Dewitt Landfill located near Butternut Creek and the Old Erie Canal, is approximately 3,000 feet outside of the Onondaga Lake basin, in the Oneida Lake drainage basin. The Town of Tully Landfill also appears to be just outside of the Onondaga Lake basin.

2.0 SITE HISTORY

2.1 Owners/Operators

The original facility was built in the mid 1920s by Draycott Mills for the production of felt roofing materials. The plant was bought by Cowles Chemical Company in 1946, who used the facility for the manufacture of potassium and sodium silicates, as well as industrial detergents. Stauffer Chemical Company purchased the facility in 1968, producing industrial cleaners and dry cleaning compounds until 1981. The plant was closed in 1985, and Stauffer Chemical Company was subsequently merged into Rhone-Poulenc. Stauffer Management Company (SMC) assumed management of the site in 1987 and receives support services from ZENECA, Inc., an affiliate. Both companies are subsidiaries of Zeneca Holdings, Inc.

2.2 Site Operations

Originally, felt roofing materials were produced at the Skaneateles Falls site by Draycott Mills. Starting in 1946, Cowles Chemical Company manufactured potassium and sodium silicates, as well as industrial detergents. When Stauffer Chemical Company took over the facility in 1968, manufacturing of industrial cleaners, dry cleaning compounds, lubricants, metal finishing compounds and softeners began. Operations at the site ceased in 1981.

2.3 Generation and Disposal of Wastes

In the process of manufacturing cleaning products, meta and ortho toluic acid was produced. As part of this process, xylene, a volatile organic compound (VOC), is oxidized in a reactor with a catalyst at high temperatures, forming toluic acid and a byproduct, isophthalic acid.

Waste produced from production of sodium and potassium silicates included water insoluble salts, residual sand and process water.

Starting with the Cowles Chemical Company, on-site disposal mechanisms were maintained for the disposal of wastes. An on-site landfill received process wastes, silicate sludges, and general plant refuse until 1973. Process water was neutralized and piped to on-site settling basins, which were used until 1981, and closed in 1982 under a NYSDEC permit. An on-site sludge disposal area and sanitary sewage leachfield were also used until 1981.

Stauffer Management Company obtained a SPDES permit from NYSDEC in 1987, after closure of the plant, for the discharge of 27,000 gpd of treated landfill leachate, groundwater, and stormwater to Skaneateles Creek. The operational facility discharged process wastewater to the creek under prior SPDES permits as well.

Solid and industrial wastes, including hazardous wastes, were disposed of at the on-site landfill by both Cowles Chemical Company and Stauffer Chemical Company from 1946 to 1973. Starting in 1964, other Onondaga County landfills and dump sites were also used for waste disposal. Table 1 displays the quantities and types of wastes that were sent to these sites during various periods of operation, as determined by ZENECA/SMC and NYSDEC. The locations of these disposal areas are shown in Figure 1, with the exception of the Tantalio Landfill, the Verdi Property, and the Novak Farm site, which are outside Onondaga County.

Table 1: Summary of Disposal of Hazardous and/or Industrial Wastes Generated by the Skaneateles Falls Facility

Disposal Site	Material	Quantity	Frequency	Period of Disposal
Landfill within Skaneateles Falls Facility Skaneateles Falls, NY	Dry Alkaline Waste, Off-Grade Detergents & Silicates, Floor Sweepings, Fiber and Steel Drums, Pallets, Metal Scrap, Miscellaneous Wood, Paper, etc.	5 - 30 cubic yards	Weekly	1946 - 1973
Town of Skaneateles Falls Landfill Skaneateles Falls, NY	Papers, Obsolete Labels, Unused Paper Bags, Scrap Wood	Unknown	Unknown	1982 - 1985
	Empty Plastic Bags that once contained Potassium Carbonate	250 Bags	Twice	
Maestri Site Geddes, NY	Chemical Waste containing VOC material, pesticides	400 drums	Once	1977
Town of Dewitt Landfill Dewitt, NY	Asphaltic Residue, Filter Cake, Miscellaneous Floor Scrap	3,000 drums 700 drums 500 drums	Once	1972
Tully Town Dump Tully, NY	Asphaltic Residue in 55-gallon drums	up to 2,000 drums	Weekly	1964 - 1968
Onondaga Nation Drum Site Nedrow, NY	Ignitable wastes, hazardous substances	1,250 drums (250 containing hazardous waste)	Unknown	1960s
Tantalo Landfill Seneca Falls, NY	Dry Chemical Wastes, Floor Sweepings, Off-Grade Product	40 tons	Monthly	1973 - 1978
Verdi Property Savannah, NY	Industrial Sludge, Mixing Equipment, Washout Wastes	4,000 gallons	Monthly	1973 - 1978
Novak Farm McDonough, NY	55-gallon drums containing VOC material, PCB material	3,000 drums	Once	Unknown

Source: ZENECA/SMC Mailing 2, p. 000321 and NYSDEC Inactive Hazardous Waste Disposal Reports.

3.0 POTENTIAL PATHWAYS FOR RELEASE OF HAZARDOUS SUBSTANCES TO THE LAKE SYSTEM

3.1 Soil

The Skaneateles Falls site is listed on NYSDEC's registry of inactive hazardous waste disposal sites in Onondaga County. Soil at the site is extensively contaminated with volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals from on-site disposal of chemical wastes. Contaminated soil at this location, however, does not present a pathway for release of contamination to Onondaga Lake, as the site is located within the Seneca River drainage basin.

Off-site disposal areas in Onondaga County used by Stauffer Chemical Company (see Table 1) are more likely pathways for contamination to the lake, as two of the sites are located within the Onondaga Lake basin. The Maestri site in particular, is approximately 1,500 feet from the western shore of the lake. Remediation is ongoing at this site, as well as at the Onondaga Nation Barrel site and the Novak Farm site. All three areas are included in NYSDEC's registry of inactive hazardous waste disposal sites. As per an agreement between NYSDEC and ZENECA/SMC, no soil contamination data for these three sites were required to be included in their 104(e) response. This agreement is mentioned in ZENECA/SMC's supplemental response letter to NYSDEC, dated January 26, 1996: "It was further agreed that the EPA and NYSDEC would not require at this time further information from ZENECA, SMC and Rhone-Poulenc regarding the Skaneateles Falls facility, the Novak Farm site, the Maestri site, and the Onondaga Drum site (where Skaneateles Falls waste has been alleged to have gone), as SMC is currently performing remedial activity at those locations and the NYSDEC and/or EPA already have been provided substantial information by SMC with

respect to these sites” (Mailing 2, p. 000305). Information regarding soil contamination for the other off-site disposal areas was not requested, however it is possible that these disposal sites have been contaminated in a similar fashion as the Skaneateles Falls site, as extensive contamination resulted from on-site disposal of wastes similar to those wastes sent to off-site disposal locations.

3.2 Surface Water

Surface water from the Skaneateles Falls site drains into Skaneateles Creek, which flows north through the site and into the Seneca River. The Seneca River flows into the Oswego River which discharges into Lake Ontario. Off-site contamination from VOCs and PAHs have been detected in sediments of Skaneateles Creek, and it has been determined that the on-site landfill was the primary source of this contamination. While Skaneateles Creek has been contaminated by waste from the facility, the site is located outside of the Onondaga Lake basin. Surface water appears to ultimately drain into Lake Ontario, rather than Onondaga Lake. It is possible, however, that surface runoff, potentially containing waste from this facility, has contaminated the Onondaga system from disposal sites located within the Onondaga Lake basin.

3.3 Groundwater

Groundwater at the Skaneateles Falls facility, and at a location 500 feet west of the site, has been found to contain elevated levels of VOCs and SVOCs. Groundwater from the Skaneateles Falls site does not flow into the Onondaga Lake system as it is located within the Seneca River basin. Groundwater underlying disposal sites closer to Onondaga Lake may have been similarly contaminated and represents a potential source of contaminants to the lake system.

3.4 Air

The primary pollutants found at the Skaneateles Falls site are VOCs, and therefore air pollution may be a local source of contamination. It is unlikely, however, that air pollution from the facility is transported directly to Onondaga Lake. It is possible that volatile waste that has been deposited at disposal sites closer to the lake may have been a source of air pollution. For disposal sites within the Onondaga Lake basin, air pollution represents a local source of contaminants to the atmosphere with potential deposition to the ground surface and subsequent transport to Onondaga Lake or its tributaries via surface runoff.

3.5 County Sewer System

It is likely that process wastewater from the Skaneateles Falls facility may have been released to the sewer system and subsequently discharged to a sewage treatment plant or directly to Skaneateles Lake or Skaneateles Creek. It is therefore not possible that potential contamination in the sewer system has affected Onondaga Lake.

4.0 LIKELIHOOD OF RELEASE OF HAZARDOUS SUBSTANCES TO THE LAKE SYSTEM

4.1 Documented Releases

Discharges of solid and industrial wastes, including hazardous wastes, to an on-site landfill, as well as wastewater to Skaneateles Creek are described in Section 2.3 of this report. Documentation of off-site disposal of wastes is also included in Section 2.3, as tabulated in Table 1. No on-site spills were documented by ZENECA/SMC for the Skaneateles Falls facility.

4.2 Threat of Release to the Lake System

4.2.1 Extent of Site Contamination

The landfill at the Skaneateles Falls site covers an area of approximately 3 acres and contains an estimated quantity of 38,000 cubic yards of waste. The waste consists of debris (wood, scrap metal, brick and concrete), general waste (plastic, paper, and glass), manufacturing waste, soil fill and a number of crushed drums. Sampling at, and in the vicinity of, the landfill has revealed the presence of VOCs, SVOCs, arsenic, cobalt, copper, lead, magnesium, mercury and zinc.

4.2.2 Migration Potential of Contaminants

The migration potential of contaminants of concern at the Skaneateles Falls site is not addressed here since the facility is located outside of the Onondaga Lake drainage basin.

Groundwater and surface water are potential mechanisms for transport of contaminants from two of the off-site disposal locations (Maestri site and Onondaga Nation Barrel site) to the Onondaga Lake system. However, ZENECA/SMC was not required to provide environmental data for these sites; thus a more definitive assessment can not be made.

5.0 POTENTIAL FOR ADVERSE IMPACTS TO LAKE SYSTEM DUE TO A RELEASE OR THREAT OF A RELEASE

5.1 Hazardous Substance Characteristics

The primary pollutants of concern for the ZENECA/SMC Skaneateles Falls facility, and potentially for the off-site disposal areas used by Stauffer Chemical Company, are volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and select metals/inorganics. Volatile organic compounds found on and adjacent to the Skaneateles Falls site include benzene, toluene, ethylbenzene, xylenes, trichloroethene, tetrachloroethene, dichloroethene, dichloroethane, and vinyl chloride. Semi-volatiles found on and adjacent to the site include phenols, toluic acids, PAHs, and phthalate compounds. Inorganics found on and adjacent to the site include aluminum, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, lead, magnesium, manganese, mercury, nickel, zinc, and cyanide.

A description of the characteristics (mobility, toxicity, persistence, and bioaccumulation) of these substances can be found in the Contaminant Fate and Transport and Quantitative Risk Assessment sections of the Remedial Investigation Report for the Skaneateles Falls site (EA Engineering, Science, and Technology, December 1993). The contaminants are not described in this Site Summary Report since the site is outside of the Onondaga Lake basin. However, as stated earlier, it is possible, based on waste disposal records, that some of these contaminants are present in the two off-site disposal locations that are within the Onondaga Lake basin. The potential impacts of these sites on the Onondaga Lake system as well as the characteristics of hazardous substances present at these sites will be discussed in separate reports.

5.2 Quantity of Substance

The landfill within the Skaneateles Falls facility is estimated to contain 38,000 cubic yards of waste (Mailing 1, p. 000201). Two of the off-site disposal facilities used by Stauffer Chemical Company, the Maestri site and the Onondaga Nation Barrel site, are within the Onondaga Lake drainage basin. Approximately 400 55-gallon drums of hazardous waste generated at the Skaneateles Falls facility were disposed at the Maestri site and 250 55-gallon drums of hazardous waste were disposed at the Onondaga Nation Barrel site. Over 4,000 drums of waste were disposed at the Town of Dewitt Landfill, situated just outside the Onondaga Lake basin.

5.3 Levels of Contaminants

Contaminant levels found at the Skaneateles Falls site are not included, as the facility is located outside the Onondaga Lake basin. Stauffer Chemical Company was not required to provide information regarding contaminant levels at any of the off-site disposal areas.

5.4 Impacts on Special Areas

An assessment of the impact of the Skaneateles Falls facility on special areas was not conducted since the facility is outside the Onondaga Lake drainage basin. Onondaga Creek and one of its tributaries are Class C streams adjacent to the Onondaga Nation Barrel site, and are therefore not considered "protected" in New York State. The Maestri site is adjacent to a New York State Freshwater Wetland. Also, the portion of Onondaga Lake adjacent to the Maestri site is a Class B waterbody and is thus considered "protected" in New York State.

Should the Maestri site be within the Ninemile Creek subbasin, which is a Class C stream in this area, then the receiving water would not be considered a "protected stream."

6.0 SUMMARY OF CONCERNS

ZENECA Inc. and Stauffer Management Company provided contamination levels in soil and groundwater at the Skaneateles Falls site; however, due to its location outside the basin, this site is not considered a source of contamination to the Onondaga Lake system. Information on contaminant levels at the off-site disposal locations used by Stauffer Chemical Company was not required for the 104(e) response. These off-site locations represent potential pathways of contamination to the Onondaga Lake system, as two of these sites are located within the Onondaga Lake drainage basin. The Maestri site and the Onondaga Nation Barrel site are the disposal locations with the greatest potential for transport of pollutants to the lake. It is possible that there have been historic releases of volatile organic compounds, semi-volatile organic compounds or metals to the soil, groundwater, air and the lake and/or its tributaries as a result of Stauffer Chemical Company waste. A more definitive assessment of the impact of each of these off-site disposal locations on the Onondaga Lake system cannot be made based on the information ZENECA/SMC was required to include in its 104(e) response. The potential impacts to the Onondaga Lake system of the disposal sites located within the drainage basin will be evaluated individually in separate reports.

REFERENCES

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ZENECA/SMC Plant and Disposal Site Locations

